

Appl. No. 10/657,595
Docket No: 14406US03
Resp. dtd. Feb. 21, 2007
Reply to Office Action of Aug. 21, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1-29. (Cancelled)

30. (Previously presented) A method of controlling a node having a low power state in a wireless network comprising:

waking a node in the low power state at a timed interval to receive a broadcast packet;

receiving at the node at least one broadcast packet transmitted periodically; and

synchronizing the node to a broadcast packet to allow the node to receive a message intended for the node.

31. (Previously presented) A method as recited in claim 30 wherein the node receives the message immediately following the broadcast packet.

32. (Previously presented) A method as recited in claim 30 wherein a received broadcast packet includes one or more values to allow a node to determine a time that a subsequent broadcast packet is expected to be received.

33. (Previously presented) A method as recited in claim 30 including determining at the node from information received in a broadcast packet when to expect a subsequent broadcast packet.

34. (Previously presented) A method of controlling a node having a low power state in a wireless network, the method comprising:

waking a node in a low power state at a time when a broadcast message is expected to be received;

receiving at the waken node the expected broadcast message; and

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synchronizing the node to a received broadcast message to allow the node to receive a subsequent message.

35. (Previously presented) The method of claim 34, further comprising determining at the node, from information received in a broadcast message, a time to expect receipt of a subsequent message.

36. (Previously presented) The method of claim 34, wherein a received broadcast message comprises one or more values to allow a node to determine a time that a subsequent broadcast polling message is expected to be received.

37. (Previously presented) A method of controlling anode having a low power state comprising: calculating at a node a time at which a broadcast message is expected to be received; waking a node in the low power state at a time at which a broadcast message is expected to be received; synchronizing the node to a received broadcast message to allow the node to receive a subsequent message stored in the network for the node.

38. (Previously presented) A method of controlling a node in a wireless network to communicate with another node having a low power state comprising:

storing at a node a message intended for another node while the other node is in a low power state;

broadcasting from a node at least one polling packet in a polling packet time slot; and

transmitting the stored message to the other node following the broadcast polling packet.

39. (Previously presented) A method as recited in claim 38 wherein the stored message is transmitted immediately following a polling packet.

40. (Previously presented) A method of controlling a node in a wireless network to communicate with another node having a low power state comprising:

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broadcasting from a node at periodic intervals at least one message to which another node can synchronize to when the other node wakes in a low power state;

receiving a response from the other node indicating that the other node has synchronized to the broadcast message; and

subsequently transmitting to the other node a message that was stored while the other node was in the low power state.

41. (Previously presented) A method as recited in claim 40 wherein the broadcast message includes values to allow the other node to calculate when a subsequent message is expected to be broadcast.

42. (Previously presented) A component for communicating in a wireless network comprising:

a node comprising a network interface for receiving and transmitting messages and a software control for waking the node in a low power state at a time when a broadcast message is expected to be received to allow the node to receive a broadcast message, the node synchronizing to a received broadcast message to allow the node to receive a subsequent message.

43. (Previously presented) A component for communicating in a wireless network comprising:

a first node for broadcasting at periodic intervals one message to which a second node can synchronize to when the second node wakes in a low power state; and

the second node waking in a low power state at a timed interval to receive a broadcast message, the second node synchronizing to the broadcast message to allow the second node to receive a message following the broadcast message.

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44. (Previously presented) The method of claim 34, wherein waking a node in a low power state at a time when a broadcast message is expected to be received comprises waking the node periodically.

45. (Previously presented) The method of claim 34, wherein waking a node in a low power state at a time when a broadcast message is expected to be received comprises waking the node at a timed interval.

46. (Previously presented) The method of claim 34, wherein waking a node in a low power state at a time when a broadcast message is expected to be received comprises waking the node at a calculated wake time.

47. (Currently amended) The method of claim 46, further comprising, prior to waking the node, calculating the calculated wake time based, at least in part, on information received in the-a previously received broadcast message.

48. (Previously presented) The method of claim 34, wherein the received broadcast message is a polling message.

49. (Previously presented) The method of claim 48, wherein the subsequent message is a message different from a polling message.

50. (Previously presented) The method of claim 34, wherein the received broadcast message comprises one or more values to allow a node to determine a time that a subsequent broadcast message is expected to be received.

51. (Previously presented) The method of claim 34, further comprising receiving at the waken node the subsequent message immediately following receiving the expected broadcast message.

52. (Previously presented) A node for communicating in a wireless network, the node comprising at least one component that operates to:

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wake the node from a low power state at a time when a broadcast message is expected to be received;

receive at the waken node the expected broadcast message; and

synchronize the node to the received broadcast message to allow the node to receive a subsequent message.

53. (New) The method of claim 47, wherein the previously received broadcast message is the same type of message as the expected broadcast message.

54. (New) The method of claim 47, wherein receiving the expected broadcast message comprises receiving the expected broadcast message consecutively after the previously received broadcast message.

55. (New) The method of claim 34, wherein the received broadcast message and the subsequent message are both the same particular type of message, and synchronizing the node to allow the node to receive the subsequent message comprises synchronizing the node to skip at least one of the particular type of message transmitted between the received broadcast message and the subsequent message.

56. (New) The method of claim 47, wherein the information received in a previously received broadcast message comprises seed information.

57. (New) The method of claim 34, wherein the received broadcast message comprises information identifying that another message awaits delivery to the node.

58. (New) The method of claim 34, wherein the received broadcast message comprises a pending message list.

59. (New) The method of claim 34, wherein the received broadcast message comprises information identifying nodes that have a message awaiting delivery.

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60. (New) The method of claim 34, wherein the received broadcast message is broadcast to a plurality of recipients.

61. (New) The method of claim 34, wherein the received broadcast message comprises information directed to a plurality of nodes.

62. (New) The method of claim 34, wherein receiving at the waken node the expected broadcast message comprises receiving the expected broadcast message from a node of the wireless network that provides mobile terminals access to the wireless network.

63. (New) The method of claim 34, wherein the node is a mobile terminal.

64. (New) The method of claim 34, wherein the node is a handheld battery-operated mobile terminal.

65. (New) The method of claim 34, wherein receiving at the waken node the expected broadcast message comprises receiving the expected broadcast message utilizing spread spectrum technology.

66. (New) The method of claim 34, further comprising prior to receiving the subsequent message, transmitting a signal to the wireless network requesting the subsequent message.

67. (New) The method of claim 34, further comprising, if the received broadcast message does not indicate that a message is awaiting delivery to the node, then re-entering the node into the low power state.

68. (New) The method of claim 34, further comprising transmitting a message indicating that the node is operating in a power save mode.

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69. (New) The node of claim 52, wherein the at least one component operates to wake the node from a low power state at a time when a broadcast message is expected to be received by, at least in part, operating to wake the node periodically.

70. (New) The node of claim 52, wherein the at least one component operates to wake the node from a low power state at a time when a broadcast message is expected to be received by, at least in part, operating to wake the node at a timed interval.

71. (New) The node of claim 52, wherein the at least one component operates to wake the node from a low power state at a time when a broadcast message is expected to be received by, at least in part, operating to wake the node at a calculated wake time.

72. (New) The node of claim 71, wherein the at least one component further operates to, prior to waking the node, calculate the calculated wake time based, at least in part, on information received in a previously received broadcast message.

73. (New) The node of claim 52, wherein the received broadcast message is a polling message.

74. (New) The node of claim 73, wherein the subsequent message is a message different from a polling message.

75. (New) The node of claim 52, wherein the received broadcast message comprises one or more values to allow a node to determine a time that a subsequent broadcast message is expected to be received.

76. (New) The node of claim 52, wherein the at least one component further operates to receive at the waken node the subsequent message immediately following receiving the expected broadcast message.

77. (New) The node of claim 72, wherein the previously received broadcast message is the same type of message as the expected broadcast message.

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78. (New) The node of claim 72, wherein the at least one component operates to receive the expected broadcast message by, at least in part, operating to receive the expected broadcast message consecutively after the previously received broadcast message.

79. (New) The node of claim 52, wherein the received broadcast message and the subsequent message are both the same particular type of message, and the at least one component operates to synchronize the node to allow the node to receive the subsequent message by, at least in part, operating to synchronize the node to skip at least one of the particular type of message transmitted between the received broadcast message and the subsequent message.

80. (New) The node of claim 72, wherein the information received in a previously received broadcast message comprises seed information.

81. (New) The node of claim 52, wherein the received broadcast message comprises information identifying that another message awaits delivery to the node.

82. (New) The node of claim 52, wherein the received broadcast message comprises a pending message list.

83. (New) The node of claim 52, wherein the received broadcast message comprises information identifying nodes that have a message awaiting delivery.

84. (New) The node of claim 52, wherein the received broadcast message is broadcast to a plurality of recipients.

85. (New) The node of claim 52, wherein the received broadcast message comprises information directed to a plurality of nodes.

86. (New) The node of claim 52, wherein the at least one component operates to receive at the waken node the expected broadcast message by, at least in part, operating

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to receive the expected broadcast message from a node of the wireless network that provides mobile terminals access to the wireless network.

87. (New) The node of claim 52, wherein the node is a mobile terminal.
88. (New) The node of claim 52, wherein the node is a handheld battery-operated mobile terminal.
89. (New) The node of claim 52, wherein the at least one component operates to receive at the waken node the expected broadcast message by, at least in part, operating to receive the expected broadcast message utilizing spread spectrum technology.
90. (New) The node of claim 52, wherein the at least one component further operates to, prior to receiving the subsequent message, transmit a signal to the wireless network requesting the subsequent message.
91. (New) The node of claim 52, wherein the at least one component further operates to, if the received broadcast message does not indicate that a message is awaiting delivery to the node, cause the node to re-enter the low power state.
92. (New) The node of claim 52, wherein the at least one component further operates to transmit a message indicating that the node is operating in a power save mode.